

## **RESPONSE TO ENGINEERING COMMENTS**

### **ORCHARD HEIGHTS 380 TUNXIS ROAD WEST HARTFORD, CONNECTICUT**

May 31, 2019

Note: The following are responses to Town of West Hartford engineering memorandum comments dated, May 28, 2019.

#### Plan Set:

1. Note added as #3 in "GENERAL NOTES" on Sheet 4.
2. The outlet pipe and flared end have been replaced with RCP and a concrete culvert end.
3. The grading has been updated with spot elevations near the culvert end to direct runoff to the depressed plunge pool area.
4. Those areas referenced have been renamed "Plunge Pool".
5. The elevation has been revised to 303.0.
6. The callout for WQS-1 has been revised to indicate a 12" inlet pipe and a 15" outlet pipe as designed in the storm sewer calculations.
7. Callouts added to Sheet 7 and details added to Sheet 14.
8. Done

#### Stormwater Management Report:

9. The internal weir within OCS-1 is set at elevation 308.0 (6" above the top of chamber elevation) to prevent bypass. This was sent to the product manufacturer for review. Rob Lemire, Engineered Product Manager of A.D.S/Stormtech concurs with this design.
10. The 6" orifice is raised 9" above the 24" HDPE manifold pipe to direct the first flush into the Isolator Row for sediment capture. The additional weir in MH4 will ensure that sediment will remain in the Isolator Row. This configuration was discussed with the manufacturer for concurrence and he agreed that the Isolator Row design will function as intended.

11. A 4" perforated HDPE underdrain has been added adjacent to the isolator row to allow for the system to drain down.
12. A detail for storm manhole M4 has been provided. The internal weir in M4 will ensure that sediment will remain in the Isolator Row. Flow will spill over the weir into the second group of chambers for the 10 through 100-year storm events (the second row of chambers is not a separate system). This configuration was discussed with the manufacturer whom concurs with the design.
13. The weir within OCS-1 is designed at Elev. 308.0. The 100-year storm reaches a maximum elevation of 308.46 so it will go over the weir. The downstream 8" HDPE pipe is part of the multi-stage design, so it has the capacity to convey the reduced flow from the 100-year design storm. Refer to the Pond Report included in Appendix B which includes the weir, orifices, outlet pipe as part of the multi-stage calculations as well as the associated stage/discharge. The 8" HDPE emergency discharge pipe referenced in Storm Manhole M4 is provided in the event of a failure or obstruction within the subgrade system. The invert of 308.6 is located above the top of stone elevation of 308.5. The 100-year design storm reaches a maximum elevation of 308.46 within the subgrade system. As a result this pipe does not need to be included in the Hydraflow analysis.
14. Done.
15. CB 2A is location in a sag. A downgradient spot elevation of 309.9 has been added to clarify.
16. Done.
17. The 10-year elevation of 305.96 (from the detention design) is used as the starting HGL/tailwater in the Hydraflow storm sewer calculations. HGL calculations have been included.